have suggested that each gene is a super-molecule; and that would seem to be implied by its great stability[1]; a mere mixture of molecules would hardly preserve its identical constitution through countless generations of cells and the vicissitudes of the species during many millions of years.

But the nature of colloids suggests an alternative possibility. The colloidal substance is an aggregation of similar molecules of a loose kind. Writing of the large molecules of protein or near proteins (the polypeptides) Moore tells us: ' Without true atomic union between them there may be ten, twenty, thirty, sixty molecules forming a great aggregate molecule. This is the form, in which proteins occur in living cells, and is an example of an organic colloid.' He adds : ' All living structures consist of colloids.'

Moore goes on to say that the cohesion of molecules to form the colloid is a true chemical combination; and yet does not involve the valencies of the atoms of which the molecules are composed. All the atomic valencies known to the chemist are satisfied or fully saturated, and therefore incapable of attaching to their molecule a single additional atom; and yet the molecules * unite most strongly to one another with evolution of energy, and this without the loosening of any atomic affinities '.

Nor is this cohesion a merely physical * adsorption '.

* The experimental evidence is complete and convincing that these saturated molecules possess no remaining trace of atomic affinity, that the molecular unions must arise

not from atomic affinities, but from ' molecular affinities '.

[1] But a stability far greater than chemistry would lead us to expect; for, as Moore said, in non-living matter molecular instability increases with every increase of molecular complexity.